"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

AUTHORS: Barkov, L.M., Makar'in, V.K., Mukhin, K.N. 89-7-13/32

TITLE: Measuring of the Diffusion Length of the Thermal Neutrons in Ice (Izmereniye diffuzionnoy dliny teplovykh neytronov vo l'du)

PERIODICAL: Atomnaya Energiya, 1957, Vol. 3, Nr 7, pp. 54-55 (USSR)

ABSTRACT: In an ice prism of 100x100x130 cm^3 the authors carried out measurements of the distribution of the density of the thermal neutrons which occur with slowing down of neutrons of a Sb + Be source. The source was fitted into the center of the prism and an indium foil (by means of which the density of the thermal neutrons was measured) was irradiated at various distances from the source in channels within the prism. (17.4 < R < 31 cm). For the purpose of eliminating the influence exercised by the cavity, the indium foil was irradiated inside ice rods which were fitted within the channels. The activation due to the resonance neutrons is infinitely small in the intervals R < 17 cm because the density of the resonance neutrons at increasing distance from the source decreases rapidly. The activation by the resonance neutrons at R = 17 cm amounts to only 0.1% of the entire activation of the foil. The method of the measurements was described already in one of the authors previous works. The diffusion length for ice at

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Measuring of the Diffusion Length of the Thermal Neutrons in Ice 89-7-13/32

t^o = - 14°C amounted to L_i = 2.85 ± 0.05 cm. The density of the ice was determined hydrostatically and amounted to 0.89±0.01 g/cm^3. The value obtained for the diffusion length L_i of the thermal neutrons in ice can be compared with the previously measured diffusion length of the neutrons in water: L_w = 2.68 ± 0.02 cm. When comparing the value, the various ranges of the absorption $_c$ and the transition $_{tr}$ for water and ice must be taken into account. Next, some details are discussed. The agreement of the experimental value for L_i with that of L_w (by taking account of the dependence of the ranges $_c$ and $_{tr}$ upon the density and the temperature) indicates a slight influence of the modification of the chemical binding upon the diffusion length on the occasion of transition from water to ice. (L 0.1 cm). There is 1 Slavic reference.

SUBMITTED: February 5, 1957

AVAILABLE: Library of Congress

1. Neutrons - Diffusion - Measurement 2. Ice - Applications

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

MUKHIN, K.N.; MAKAR'IN, V.K.; VENEDIKTOV, A.P.

[Diffusion of thermal neutrons in anisotropic media.
Diffuziia teplovykh neitronov v anizotropnykh sredakh.
Moskva, Glav. upr. po ispol'zovaniiu atomnoi energii,
1960, 19 p. (MIRA 17:2)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

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S/058/62/000/004/033/ 160
A058/A101

AUTHORS: Mukhin, K. N., Makar'in, V. K., Venediktov, A. P.

TITLE: Thermal neutron diffusion in anisotropic media

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 61, abstract 4B457 (V sb. "Neytron. fizika". Moscow, Gosatomizdat, 1961, 198 - 210)

TEXT: The authors describe measurements of thermal neutron diffusion in lead-water plane and rod lattices. A photoneutron Sb + Be source was used. Special measures were taken so that the distribution of neutron sources would be close to plane. The distribution in density of thermal neutrons was measured by the indium detector method. The authors arrived at the following conclusions: 1) for plane lattices, experimental results coincide with theoretical calculations; 2) diffusion anisotropy L^2/L^2 in plane lead-water lattices can attain magnitudes of $\sim$2, and in rod lattices, $\sim$1.5.

A. Kamayev

[Abstracter's note: Complete translation]

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L 58338-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pab-10/Pt-7 IJP(c)
ACCESSION NR: AT5010446 UR/3136/64/000/704/0001/0009

AUTHOR: Makar'in, V. K.; Martem'yanov, V. P.

TITLE: Charging unit for the supply of the "pulsed magnetic field" apparatus

SOURCE: Moscow. Institut atomnoy energii. Doklady, no. 704, 1964. Zaryadnoye ustroystvo dlya pitaniya ustanovki "Impul'snyye magnitnyye polya," 1-9

TOPIC TAGS: charging unit, accelerator charging, ignitron rectifier

ABSTRACT: A power supply is described for the production of pulsed magnetic fields in bubble, spark, and emulsion chambers used with high-energy particle accelerators. The pulsed magnetic field is produced by discharging a capacitor bank through an inductance coil. The equipment is capable of high energy storage (~ 6950 kJ). Because of the use of ignitrons in the rectifier circuit and because of the inductive properties of the circuit, the battery is never discharged completely. It is recharged between the accelerator discharges, which are produced at intervals from 2 to 10 seconds. The article describes the circuit and the operating principle, the automatic control, and the protective devices. The rectifier was used to charge a capacitor bank of 0.162 F capacitance to 4.5 kV. With the

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ACCESSION NR: AT5010446

2

battery discharged to 3.5 kV, the rectifier is able to restore the initial 4.5 kV voltage within approximately 5 seconds. "The authors thank I. I. Gurevich and K. N. Mukhin for continuous interest in the work and S. Y. Leonov for help with the assembly of the charging unit." Orig. art. has: 8 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE, NP

NR REF SOV: 000 OTHER: 000

Card 2/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

L 1374-66 EWT(m) DIAAP

ACCESSION NR: AT5022306 UR/3136/65/000/795/0001/0020

22
B41

AUTHOR: Makar'in, V. K.; Martem'yanov, V. P.

TITLE: A "pulsed magnetic fields" device

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-795, 1965. Ustanovka Impul'snyye magnitnyye polya, 1-20

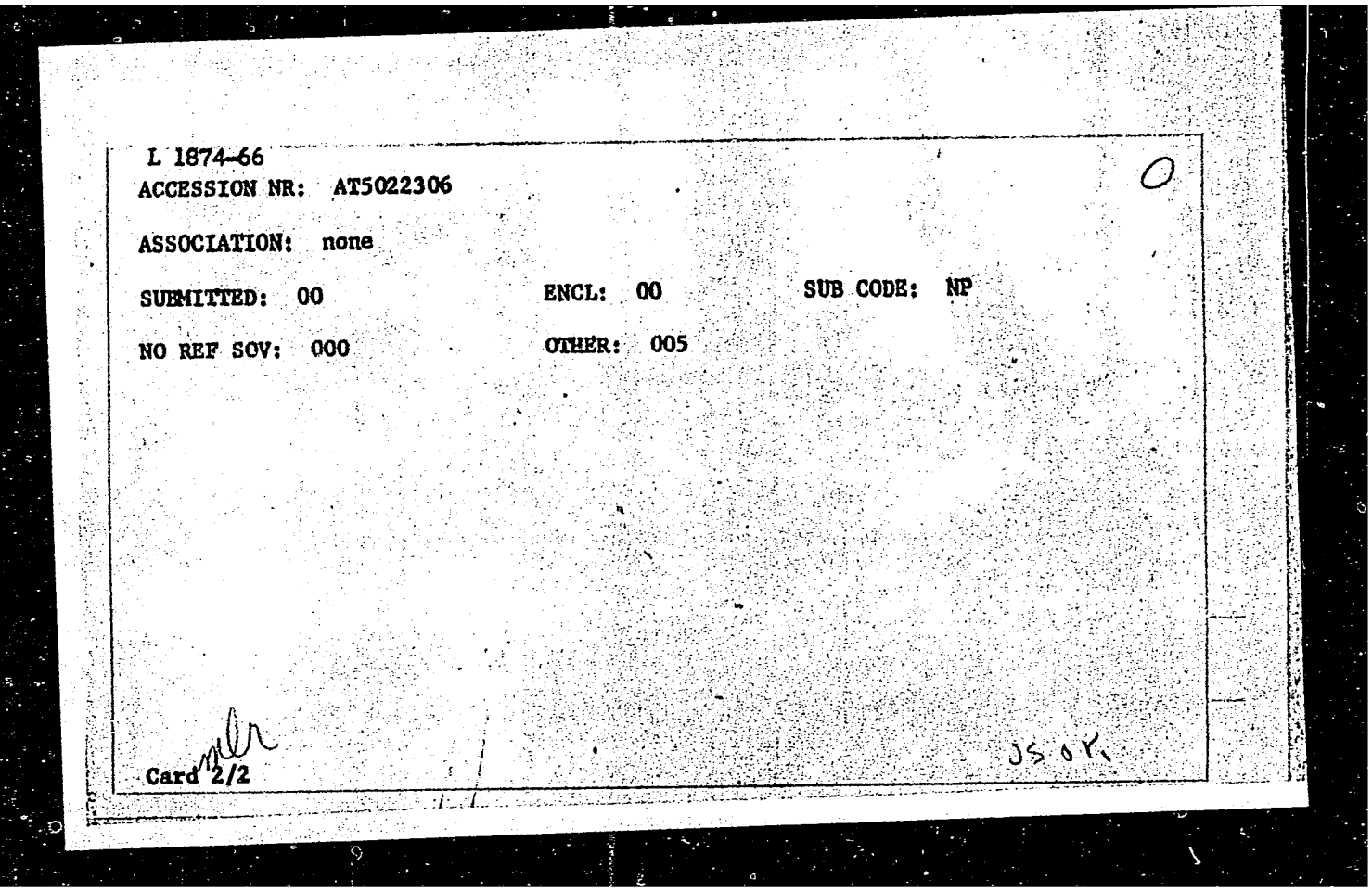
TOPIC TAGS: pulsed magnetic field, bubble chamber, magnet, solenoid

ABSTRACT: The successful use of bubble chambers[19] with "heavy" fillers (such as xenon) requires high magnetic fields in the volume of the chamber. A device producing high pulsed magnetic fields for use with high-energy particle accelerators has been designed and constructed. It consists of a charger, energy accumulator, discharge unit, and pulse magnets. The device has produced pulsed magnetic fields with $\bar{H}$ = 65 kOe in a 12-liter volume and $\bar{H}$ = 100 kOe in an 8-liter volume. The design and operation of each unit of the device are discussed, and the corresponding photographs and diagrams are provided. "The authors thank I. I. Gurevich and K. N. Mukhin for their steady interest in the work, and S. V. Leonov for assistance in assembling the device." Orig. art. has: 9 figures and 2 tables.

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L 1874-66
ACCESSION NR: AT5022306

ASSOCIATION: none

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NO REF SOV: 000 OTHER: 005

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

ACC NR: [illegible]

AUTHOR: [illegible]

ORG: Institute of Atomic Energy [illegible]

TITLE: Installation for the creation of a pulsed magnetic field [illegible] in a volume of [illegible] liters

SOURCE: Problemy [illegible] eksperimenta, no. 2, 1966, 147-151

TOPIC TAGS: magnet, magnetic field, [illegible] magnetic field, condenser, thyratron, bubble chamber instrumentation/IM-5-150 condenser, TR1-40-15 thyratron

ABSTRACT: This paper describes a [illegible] magnetic field installation designed for use in heavy liquid bubble chambers. The installation consists of 1) energy storage, 2) charging control, 3) discharge control, and 4) the impulse magnet (a solenoid). The energy storage uses 10 IM-5/150 condensers connected in parallel by sections, with safety provisions. The total capacity is .162 farads, which gives 1650 kilojoules of energy at 4.5 kv. The discharge control subsystem operates on the principle of partial automatic opposite sign recharge of the condenser bank by the oscillatory current surge. Thus most of the energy is saved and the condenser bank can be recharged in five seconds (a charge from 3.5 to 4.5 kv. only is needed). The charging is done by a three-phase rectification circuit using six TR1-40/15 thyratrons based upon a TMA-1000/35 anodic transformer (6.3 kv). Two impulse magnets were constructed

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ACC NR: AP6013516

and are described in detail. The coil windings are of square 21x21 mm copper tubing with a 12 mm inside diameter passage for the cooling water. The coil confinement is effected by 30 mm thick rings of fiberglass textolite plastic. The insulation is by 1 mm thick getinax plastic rings, radially cut once and conventionally overlapped by a 180° relative rotation. Solenoid #1, with an inside volume of 12 liters, 175 ka current amplitude and a 65 kOe average magnetic field strength sustained 5000 magnetic load applications to failure - by fracture of no. 8 confining ring. The stronger, smaller (8 liters inside volume) solenoid # 2, with a 220 ka current and a 100 kOe average magnetic field strength sustained 5300 load applications to failure, which was by short circuit at edge of coil. Design and development comments are given. Orig. art. has 5 figures and 2 tables.

SUB CODE: 20,09 / SUBM DATE: 10Mar65 / ORIG REF: 000 / OTH REF: 005

Card 2/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

ACC NR: AP6025609 (N) SOURCE CODE: UR/0413/66/000/013/0050/0050

INVENTORS: Volkov, S. N.; Makar'in, V. P.; Palevich, K. K.; Rubaylo, G. A.; Gerasimova, L. S.; Ryazantseva, V. M.; Andreyeva, I. I.; Semenova, A. S.

ORG: none

TITLE: A machine for contact spot welding. Class 21, No. 183300

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 50

TOPIC TAGS: welding, spot welding, welding technology, welding equipment

ABSTRACT: This Author Certificate presents a machine for contact spot welding. The machine contains a frame and welding transformers, each of which is electrically connected to a group of welding guns (see Fig. 1). To increase the productivity, the welding transformers together with the corresponding group of welding guns are mounted on the vertical planes of plates which move under the action of a driving mechanism located on the frame. The movement takes place along the horizontal guides also located on the frame. Rods attached to one of the plates serve as auxiliary guides for another plate. These rods are intended for fixing the plates

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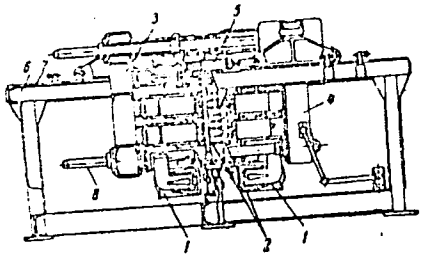


Fig. 1. 1 - welding transformers; 2 - welding guns; 3 and 4 - vertical plates; 5 - driving mechanism for plates; 6 - frame; 7 - guides; 8 - rods

in their original position prior to welding. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 16Jun65

Card 2/2

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

MAKARINA, L.A.

31541
S/627/60/002/000/024/027
D299/D304

3.2410 (2205, 2705, 2805)

AUTHORS: Varfolomeyev, A. A., Gerasimova, R. I., Gurevich, I.I., Makar'ina, L.A., Romantseva, A. S., and Chuyeva, S. A.

TITLE: Electron-photon showers with energies of 11^{11} - 10^{13} ev. in nuclear emulsions

SOURCE: International Conference on Cosmic Radiation. Moscow, 1959. Trudy. v. 2. Shirokiye atmosfernyye livni i kaskadnyye protsessy, 299-306

TEXT: A detailed investigation was carried out of 15 electron-photon showers with energies $> 10^{11}$ ev., at low depths. In contradistinction to other works, the results are compared with those obtained for cascades by the Monte Carlo method. Six emulsion stacks were used, with total volume of about 10 liters. In 5 of the stacks of emulsion Р-НИКФИ (R-NIKFI), the grain density of relativistic electrons was 30 - 35 grains per 100 μ. The energy E_γ of primary quanta which generate the shower, was determined from the

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Electron-photon showers ...

number of cascade electrons of energy higher than $\mathcal{E}_c$ = 300 Mev, at a depth of 2.5 - 3.0 t_o. A table lists (for comparison) the values of E_f, obtained by the Monte Carlo method and by formula

$$R = \frac{1}{16,1}\left\{45,0 + \ln\left[\left(\frac{2x}{E}\right)^2 (1 + 140\ x)\right]\right\} \qquad (1)$$

where x is the distance from the pair vertex in cm; this formula is semiempirical and represents the ratio of ionization losses of pairs to those of relativistic electrons; the ionization losses are due to mutual shielding of electron and positron fields. In the experiments, particular care was taken to detect the vertices of the electron-positron pairs, formed at depths $\leqslant 1.5\ t_o$. After determining the lateral shower distribution, the energy of the electrons of the pairs was measured by means of multiple scattering (to an accu-

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Electron-photon showers ...

racy of 20 - 30%) for energies of up to $(5-7)\cdot 10^8$ ev. The total number of pairs formed at depths $\leqslant 1.0\ t_0$ and $\leqslant 1.5\ t_0$ with energies higher than (1-2) Mev, is plotted in two figures, from which it is evident that the experimental points fit better the curve which takes into consideration the influence of the medium on the bremsstrahlung (the curve obtained by Migdal's formula); the curve obtained by Bethe-Heitler's formula does not fit the experimental results. The figures also show that not one of the 15 showers under consideration is anomalous. Apparently, the majority of so-called "anomalous" showers, described in literature, can be explained by statistical fluctuations in the cascades or by improper determination of the energy of primary electron-positron pairs. Another figure exhibits the experimental curves of longitudinal shower development; here, too, no appreciable deviations from the corresponding theoretical curves are observed. A table lists data on the number of pairs formed at small distances $r < 0.5\mu$ from the nearest electron track; these data might be useful in analyzing the cross-section for pair formation by high-energy electrons. There are 4

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D299/D304

Electron-photon showers ...

figures, 3 tables and 21 references: 10 Soviet-bloc and 11 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: K. Pinkau. Nuovo Cim., 3, 1285, 1956; H. Fay. Nuovo Cim., 5, 293, 1957; J. Iwadare, Phil. Mag., 3, 680, 1958; S. K. Srnivasan, J. S. Butcher, B. A. Chartres, H. Messel. Nuovo Cim., 9, 77, 1958.

Card 4/4

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

21(8) SOV/56-36-3-7/71

AUTHORS: Varfolomeyev, A. A., Gerasimova, N. I., Kasarlina, L. A., Romanteyeva, A. S., Chuyeva, S. A.

TITLE: Ionization Along the Tracks of Electron-Positron Pairs of High Energy (Ionizatsiya vdol' sledov elektronno-pozitronnykh par vysokoy energii)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 3, pp 707-716 (USSR)

ABSTRACT: In the introduction the authors discuss the problem and the results of several already published works dealing with this subject. Table 1 contains for the 5 investigated showers (R-53, 0-202, D-84, D-44 and I-109) the data of the emulsion piles in which they were recorded (see previous paper by the same authors, reference 7)). Table 2 contains a list of the E_γ-values according to Janossy (Janossi) (Refs 10, 12) and according to Chudakov (Ref 1). (Today it is possible to obtain more exact E_γ-values from curves by the Monte Carlo method by taking the influence exercised by matter on bremsstrahlung into account. The publication of respective results has been announced). A very detailed chapter of this paper deals with gauging of the emulsions (type R-MKhFI). The follow-

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Ionization Along the Tracks of Electron-Positron Pairs of High Energy

ing experimental data concern the track densities of five high-energy electron-positron pairs in these emulsions. Measurements were carried out on the first pairs of electron-photon showers. Pair energy was determined from the energy spectrum of the cascade electrons at a distance of 2.5 - 3 radiation lengths from the vertex of the first pair. In three cases pair energy was nearly $\cdot 10^{12}$ ev and in two cases it was approximately $3 \cdot 10^{11}$ ev. Track density was determined by two methods: from the grain density in the track and from the gap length distribution coefficient. Compared with a particle for which the specific energy loss is twice as great as the ionization loss of the electron, the track density of the pair near the vertex was found to be smaller. The mutual screening of the electron and positron during ionization. The results obtained are compared with the theoretical ionization curves for pairs calculated by A. Ye. Chudakov (Ref 1). The authors finally thank Professor I. I. Gurevich for his interest and discussions, A. A. Kondrashina for his help in

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Ionization Along the Tracks of Electron-Positron Pairs of High Energy SOV/56-36-3-7/71

evaluating measuring results, and B. M. Saroglovich and his group for developing the piles of emulsion plates. There are 8 figures, 2 tables, and 21 references, 5 of which are Soviet.

SUBMITTED: August 18, 1958

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

VARFOLOMEYEV, A.A.; GERASIMOVA, R.I.; GUREVICH, I.I.; MAKAR'INA, L.A.; ROMANTSEVA, A.S.; CHUYEVA, S.A.

Effect of the density of the medium on bremsstrahlung in electron-photon showers involving energies from 10^{11} to 10^{13} ev. Zhur. eksp. i teor. fiz. 38 no.1:33-45 Jan '60. (MIRA 14:9)
(Bremsstrahlung) (Cosmic rays)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

S/811/62/000/000/003/003

AUTHORS: Varfolomeyev, A.A., Makar'ina, L.A.

TITLE: The density of conglomerates (blobs) in the traces of electron pairs and the geometric effect.

SOURCE: Yadernaya fotografiya; Trudy Tret'yego Mezhdunarodnogo soveshchaniya po yadernoy fotografii, Moskva, iyul' 1960g. K.S. Bogomolov and N.A. Perfilov, eds. Moscow. Izd-vo AN SSSR, 1962, 415-418.

TEXT: The paper presents a report on experimentation and theoretical conclusions relative to the so-called geometric effect which leads to a change in the parameters of the trace of an electron-positron pair under constant ionization losses. Ionization losses on the initial portions of the track of high-energy ($\geq 10^{12}$ ev) electron-positron pairs are attributed to the mutual screening of the electron and positron fields, when their mutual distance r does not exceed an order of $5 \cdot 10^{-3}\mu$. The theoretically predicted effect has been verified experimentally (Varfolomeyev et al., IIme Colloque Internat'l Photogr. Corpusc., Montréal. Presses Univ. Montréal, 1958; ZhETF, v.36, 1959, 707). As the distance r grows up to an beyond the diameter of the sensitized grain, the density of the grains (or conglomerates) of the trace of the pair in a nuclear emulsion attains a value of 2n times the ionization loss; this geometric effect was first pointed out by R. Weill et al. (N. Cimento, v.6, 1957, 413 and 1430). The present study adduce the results of measurements of the density

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of the conglomerates and the density of the gaps along the traces of 18 e_-/e_+ pairs. The finding that the changes in probability of a flare-spot formation on AgBr grains are attributable to the geometric effect are very small contradicts Weill's conclusions. The traces of the 18 pairs had energies of $8.5 \cdot 10^{10}$ to $2.2 \cdot 10^{13}$ ev; they were registered in six emulsion piles with a total volume of 10 liters which were irradiated in the stratosphere. The energy of a pair was determined by the electron-cascade energy-spectrum method expounded in Varfolomeyev et al., ZhETF, v. 38, 1960, 33. The density of the traces was established from a visual determination of the density of conglomerates or blobs and from a measurement of the density of the gaps along the trace of a pair. An appreciable geometric effect is noted on the magnitude of the density of the conglomerates, but not on that of the gaps. This is attributed to growing flarespots between grains, until the distance has attained a value comparable to the diameter of a sensitized grain, $a=0.6\mu$; there is no comparable growth in the size of the gaps. Weill's inconsistent results are attributed to a possible misunderstanding of Della Corte's data (cf. N.Cim., v. 10, 1953, 958) relative to the effect of pair recombination on the probability of the flaring of AgBr grains. There are 1 figure and 6 references (3 Soviet and 3 English-language).

ASSOCIATION: Institut atomnoy energii im. I.V.Kurchatova (Institute of Atomic Energy imeni I.V.Kurchatov). Academy of Sciences. Moscow, USSR.

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L 8202-66 JXT(C2)
ACC NR: AT5022299 SOURCE CODE: UR/3136/64/000/620/0001/0011

AUTHOR: Gurevich, I. I.; Makar'ina, L. A.; Nikol'skiy, B. A.; Sokolov, B. V.; Surkova, L. V.; Khakimov, S. Kh.; Shestakov, V. D.; Dobretsov, Yu. P.; Akhmanov, V. V.

ORG: [Gurevich, Makar'ina, Nikol'skiy, Sokolov, Surkova, Khakimov, Shestakov] IAE; [Dobretsov] MIFI; [Akhmanov] LYaP OIYaI

TITLE: Asymmetry of the angular distribution of electrons in the decay $\pi^+ \to \mu^+ \to e^+$ in a magnetic field of 140,000 gauss

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-620, 1964, Asimmetriya uglovogo raspredeleniya elektronov pi plus → mu plus → e plus raspada v magnitnom pole napryazhennost'yu 140 000 gauss, 1-11

TOPIC TAGS: mu meson, pi meson, positron, bubble chamber, radioactive decay

ABSTRACT: The universal V-A coupling theory applied to the determination of the angular distribution of electrons in the reaction $\pi^+ \to \mu^+ \to e^+$ is given by

$$\frac{dN}{d\theta} \sim 1 - a \cos \theta_a$$

in terms of the parameter a. In order to obtain a value of a which depends on the polarization state of the meson, an experiment was performed showing the effect countering the depolarization of the dense medium through which the meson is moving.

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O

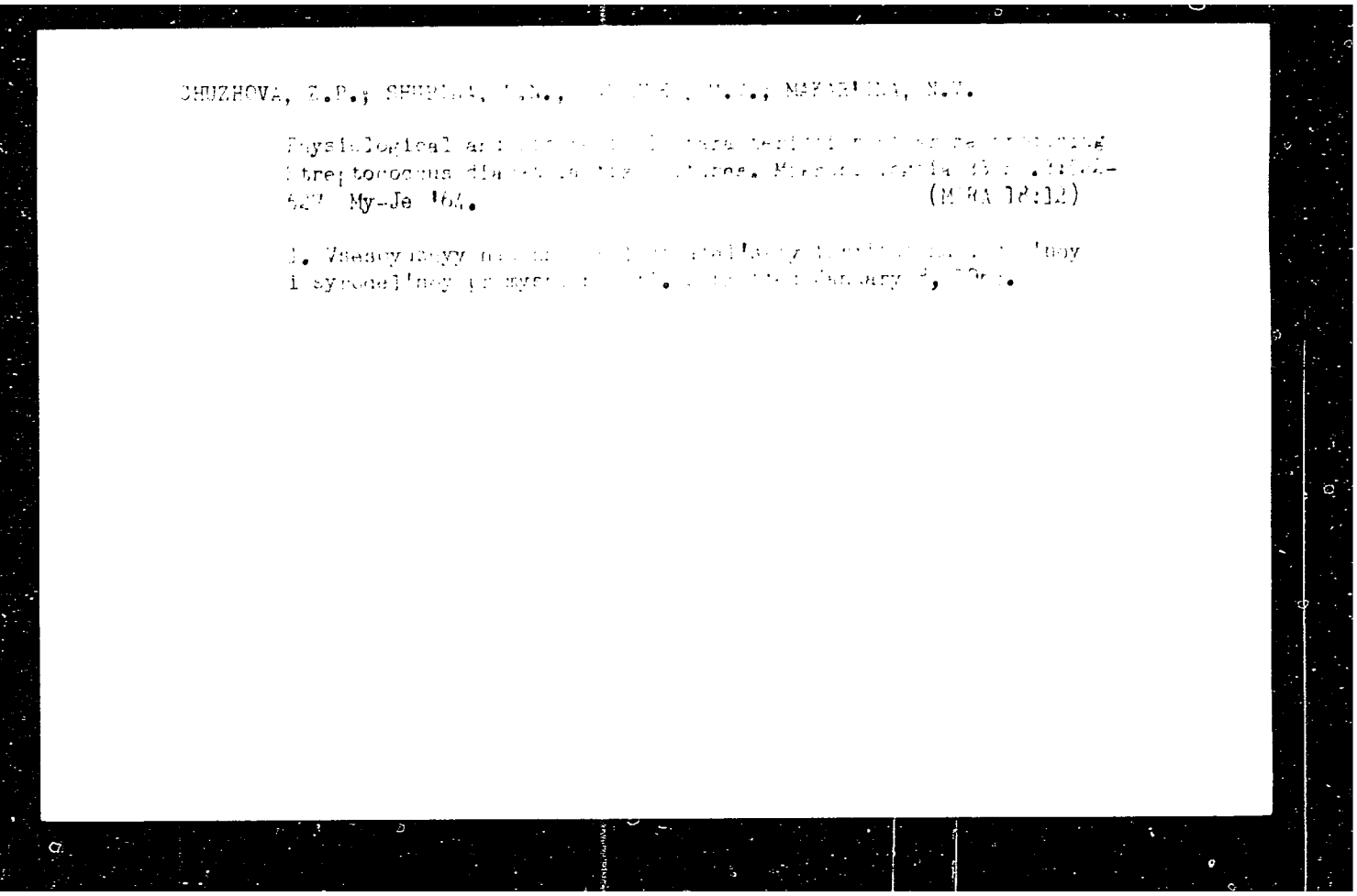
Critical magnetic fields needed to oppose the depolarizing effect, which in turn allows more accurate determination of the parameter a, were found. Only 8800 gauss were required in the hydrogen bubble chamber to counter the effect of hydrogen depolarization. However, the scatter in the value is quite large. The photographic emulsion yielded much smaller scatter but required an application of a very large magnetic field of 140,000 gauss. The value of a found in the experiment is 0.325 ± .010 (as compared to the theoretical value of 0.333). This value was obtained by analyzing over 66,000 events. A brief discussion is given of the effect of the magnetic field on the motion of the electron. It is shown that the electron direction must be measured with respect to the magnetic field direction after setting certain constraints on the selection of the angular range. Orig. art. has: 3 figures, 1 table, 5 formulas.

SUB CODE: 18/ SUBM DATE: 00/ ORIG REF: 005/ OTH REF: 007

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ZHUZHOVA, Z.P.; SHUPLYAK, V.A., [illegible]; MAKSIMOVA, N.V.

Physiological and [illegible] Streptococcus [illegible]. Mikrobiologiia 33 [illegible]-627 My-Je '64. (MIRA 17:12)

1. Vsesoyuznyy [illegible] i syvorotok [illegible] January 5, [illegible].

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OSTROVSKIY, Yu.M.; LUKASHIK, N.K.; RAZUMOVICH, A.N.; BALAKLEYEVSKIY, A.I.; DOSTA, G.A.; TREBUKHINA, R.V.; LARIN, R.S.; KARPUT', S.[illegible]; KOMAROVA, B.P.; NEPOCHELOVICH, N.S.; DVORYANINOVICH, L.N.; MOYSEYENOK, A.G.; MANDRIK, K.A.; GALITSKIY, E.A.; MATISIK, M.S.; PODOBED, V.G.; MAKARINA-KIBAK, L.Ya.

Differentiation of specific and nonspecific metabolic shifts in an acute avitaminosis B_1 caused by oxythiamine. Vop.pit. 24 no.4:41-48 Jl-Ag '65. (MIRA 18:12)

1. Kafedra biokhimii (zav. - dotsent Yu.M.Ostrovskiy) meditsinskogo instituta, Grodno. Submitted July 23, 1964.

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OMEL'CHENKO, I.; MAKARINSKIY, A. [Makaryns'kyi, A.], tekhnik

Pay more attention to the construction of barns for raising young cattle. Sil'.bud. 7 no.7:24 Jl '57. (MIRA 12:11)

1. Zaveduyushchiy Lebedinskim rayonnym otdelom po stroitel'stvu v kolkhozakh.

(Farm buildings)

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MAKARINCK[illegible], L.

Electric Power Plants

Utilization of portable electric power stations. Kinomekhanik no. 1 (1[illegible])

MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, August [illegible]. UNCLASSIFIED.

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BEZSMERTNYY, I.S., kand.tekhn.nauk; SHIFRINSON, B.L., kand.tekhn.nauk; TUSHINA, A.A., inzh.; Prinimali uchastiye: GOGICHAISHVILI, P.F., kand.tekhn.nauk; MAKARISHCHEV, A.S., inzh. [deceased]

[Installation and adjustment of an experimental section of a closed-loop low-voltage power distribution network] Ustroistvo i naladka opytnogo uchastka zamknutoi elektroseti nizkogo napriazheniia. [Leningrad] 1962. 26 p. (Informatsionnoe pis'mo, no.3). (MIRA 16:8)

. Glavnyy inzh. Podol'skogo otdeleniya Moskovskogo oblastnogo upravleniya elektrostantsiy i elektrosetey (for Makarishchev).
(Electric power distribution)

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24976

9.4300 (1482,1158,1160)

S/109/61/006/007/016/020
D262/D306

AUTHORS: Mikhaylovskiy, L.K., Makarishchev, V.P., Pollak, B.P., and Fabrikov, V.A.

TITLE: Non-linear gyromagnetic effects of a nutational character in ferrites

PERIODICAL: Radiotekhnika i elektronika, [illegible], 1178 - 1181

TEXT: This paper presented at a meeting of All-Union Scientific and Technical Society of Radio Engineering and Electrical Communications im. A.S. Popov on May 1st, 1960 deals with the non-linear gyromagnetic properties of ferrites which are responsible for the amplification of IF and permit the increase of the mixing efficiency of ferrite mixers, result from the nutational oscillations of magnetization. The nutational oscillations mentioned above have been predicted from theoretical considerations by V.A. Fabrikov (Ref. 5: Radiotekhnika i elektronika, 1960, 5, 1, 171 and (Ref. 6:

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S/109/61/006/007/016/020
D262 D302

Non-linear gyromagnetic ...

Sb. Vsyesoyuznoy konferentsii po ferritam. Minsk, 1959). The present article gives the results of experimental work by the authors, performed with the aim of determining the nonlinearity of the dependence of intermediate frequency power I_{IF} on the power of local oscillator P_H and [illegible], c) determining the presence in the ferrite sample, placed in the resonant circuit of the IF of sinusoidal oscillations of magnetization under the influence of the SHF power of the local oscillator. The source of SHF was a continuous or pulse modulated reflex generator (Klystron type 4I-M (4I-I)). The ferrite sample with the coil was placed in a section of a standard waveguide at a distance of 5 mm from the narrow wall of the waveguide. Frequency range was 3 cm, IF was [illegible] cm, IF was 30 Mc/s. The effective Q of the resonant cct was 20 at 30 Mc/s. The constant magnetic field was applied parallel to the narrow wall of the waveguide. Its magnitude was corresponding to that of the ferromagnetic resonance. The ferrite sample was a mono crystal of yttrium ferrite having the ferromagnetic resonance and 5-10 oersted. The shape of the sample was nearly spherical with unlapped

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Non-linear gyromagnetic ...

S/109/61/006/007/[illegible]/121
D262/D306

surface. The overall IF amplification was about 10^8, the noise level at the amplifier, referred to that of the 1st amplifier, was about [illegible] with a (33-) (Acoustic [illegible] noise: measuring [illegible] method described in [illegible] overcome were as follows: [illegible] in the [illegible] and changes of the [illegible] resistance of the [illegible] the [illegible] Page [illegible] was led to [illegible] the CRT [illegible] amplifier input. The [illegible] short [illegible] after [illegible] plied by the magnetron [illegible] mentary [illegible] with [illegible] of magnetron-

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Non-linear gyromagnetic ...

tion in the magnetized ferrite placed in the resonator of the IF were observed under the influence of a SHF transverse field when the power of the field exceeded a certain critical value of the order of 1-5 watts. It is shown that the observed effects are sinusoidal and have the character of relaxation oscillations observed by M.T. Weiss in a ferrite placed in a high Q cavity resonator (Ref. 4: Microwave and low frequency resonance due to resonance instabilities in ferrites. Bell. Syst. Tech. J., 1957, 36). The existence was also detected of a non-linear resonance characteristics of IF signal from which the loss of the power P_H in mixing arrangements, when P_H was more than the critical power P_{cr}. These results are in agreement with the theory of non linear gyromagnetic effects related to the nutation of ferrite magnetization (Refs. 5 and 6: Op. cit.). The final identification of these experimentally observed effects will be possible after their careful quantitative analysis. The above results may be of practical interest in problems of increasing the efficiency of SHF ferrite mixers. The experiment was carried out at the Moskovskiy ener-

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

24876

S/109/61/006/007/016/020
D262/D304

Nonlinear gyromagnetic ...

...etricheskiy Institut, Kafedra Teoreticheskikh Osnov Radiotekhniki (Moscow Power Engineering Institute, Department of Theoretical Principles of Radio-Engineering). The results of the experiment were discussed ... by the author. I.K.M. Polyanskiy. Abstracter's note: No further data given. There are 3 figures ... Soviet-bloc and 3 non-Soviet-bloc. The ... language publication ... to be ... a ferrite ... Ye. ... Ye. Bazhenov. ... relaxation ... and re... Microwave ... ties in ferrites. ... 1960, ...

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031420019-0

CIBIRAS, P., kand. med. nauk; DAKTARAVICIENE, E., kand. med. nauk; JARZEMSKAS, J., kand. med. nauk [deceased]; JOCEVICIENE, A., kand. med.nauk; KRIKSTOPAITIS, M., kand. med. nauk; NENISKIS,J., kand. med. nauk; STEPONAITIENE, L., kand. med. nauk; SURKUS, J., kand. med. nauk; SILANAS, S., kand. biolog. nauk; CEPULIS, St., prof.; KUPCINSKAS, J., prof.; LASAS, Vl., prof.; SIDERAVICIUS,Br., prof.; KANOPKA, E.,dots.; KVIKLYS, V.,dots.; LABANAUSKAS, K., dots.; POLUKORDAS, M., dots.; BABUBLYS, P., doktor; CAPKEVICIUS,V., doktor; MAKARIUNAS, P., doktor; PAKONAITIS, P., doktor; STUOKA.R., doktor; SURGAILIS, H., doktor; PAULIUKONIENE, J., red.; ANAITIS,J., tekhn. red.

[Health and diseases] Antrasis pataisytas leidimas. Vilnius, Valstybine politines ir mokslines literaturos leidykla, 1961. 356 p. (MIRA 15:3)

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[illegible], K.

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[illegible]
Praha, Czechoslovakia

Source: East European Accession List. Library of Congress
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Makarius, K.

Problems of the insulation of large rotary machines. p. 207
ELEKTROTECHNICKY OBZOR. (Ministerstvo strojirenstvi a Ministerstvo paliv a energetiky) Praha. Vol. 45, no. 4, Apr. 1956

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

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MAKARIUS, K.

A review of electric insulators for higher temperatures which have not yet been introduced in our country. p. 30.

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SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

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MAKARIUS, K.

"Problems of surface treatment of electric equipment for tropical regions."

ELEKTROTECHNIK, Praha, Czechoslovakia, Vol. 14, no. 5, May 1959

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Unclassified

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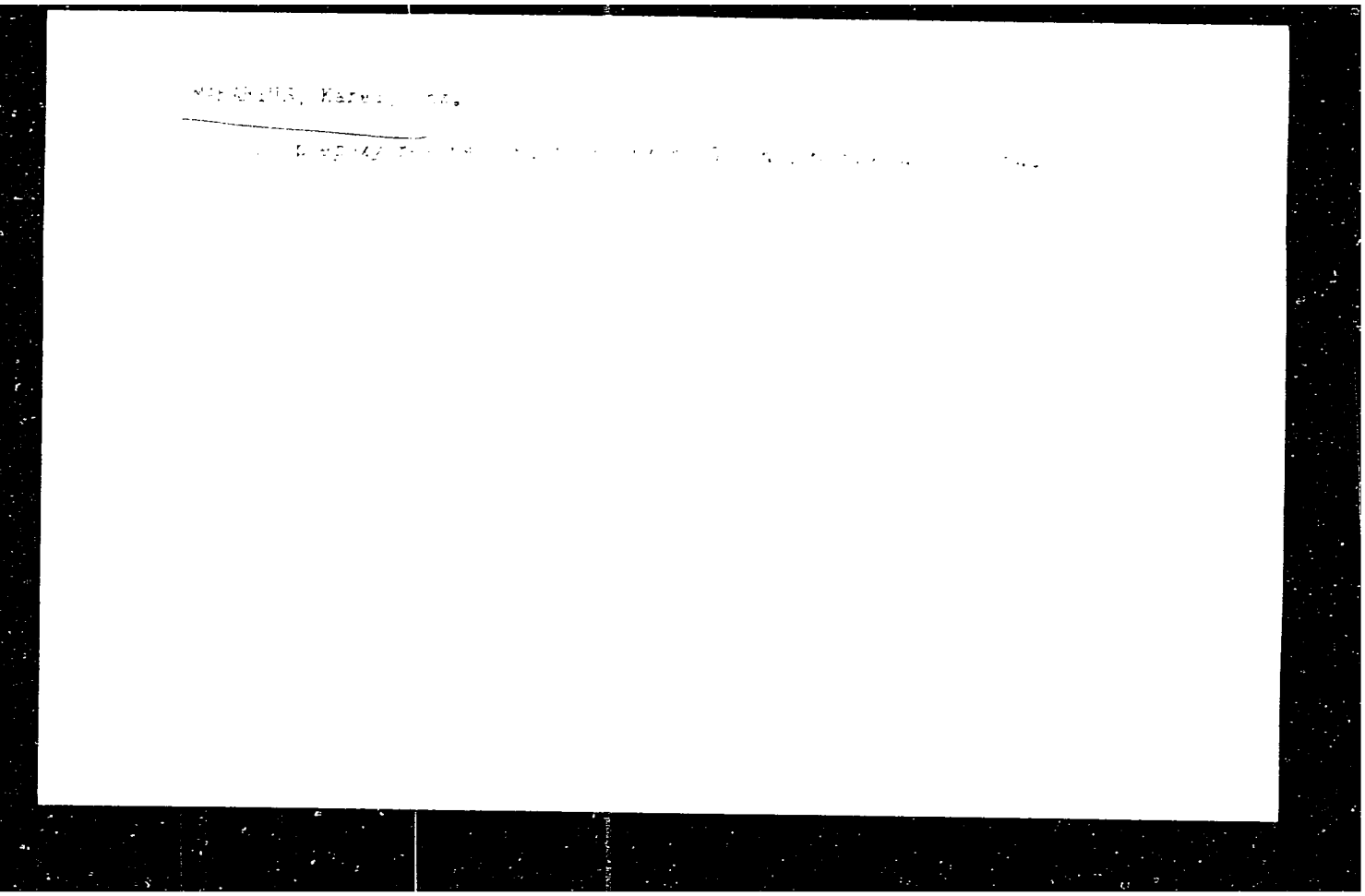
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MAKARIUS, Karel, inz.

Adhesive electric insulations. El tech obzor 52 no.8:427-432 Ag '63.

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MAKARIY, VASIL'YEVICH POTAPOV.

26369 (Spetsialist v oblasti gidrotekitniki 1887 - 1949. Nekrolog). - Podpisi: Glav. Upr. Vodnogo khozyaystva M-va sel'skogo khozyaystva SSSR. Vsesoyuz. Nauch-issled in-t gidrotekhniki i melioratsii i mosk. Gidromeliorat. In-t im. V. R. Vil'yamsa. Gidrotekhnika i melioratsiya, 1949, No. 2, s. 70-71 s. portr.

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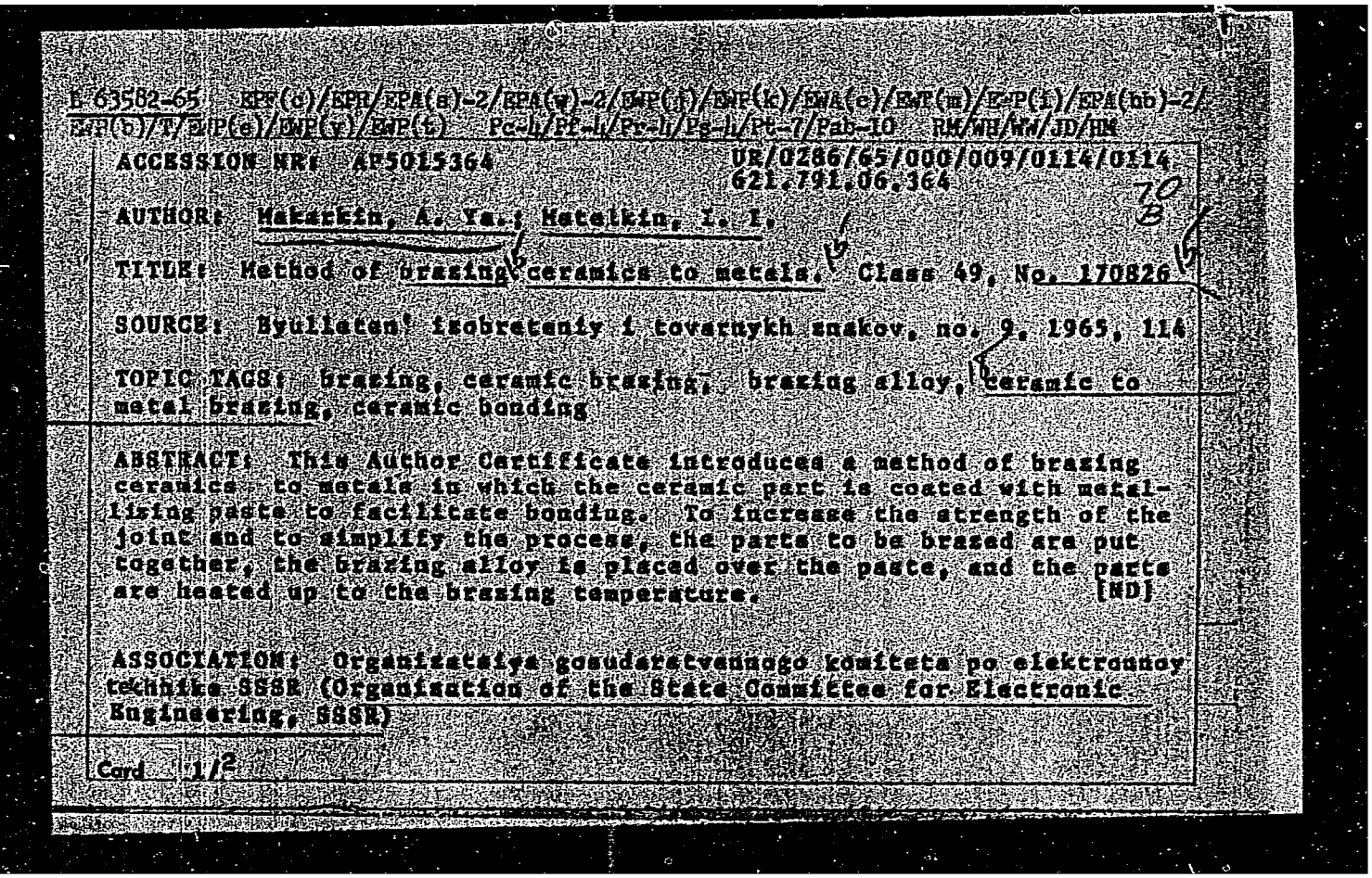
BENES, F., ing., CSc.; VRSEK, J., inz.; MAKARJEV, P., inz.; OLEJ, J., inz.

Quality characteristics and structure of low-carbon steels in continuous casting. Hut listy 18 no. 12:850-858 D '63.

1. Vyzkumny ustav hutnictvi zeleza, Praha (for all except Olej).
2. Svermove zeleziarne, Podbrezova (for Olej).

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L 63582-65 EPF(c)/EPR/EPA(s)-2/EPA(w)-2/EWP(r)/EWP(t)/EWA(c)/EWT(m)/EWP(i)/EPA(bb)-2/EWP(b)/T/EWP(e)/EWP(v)/EWP(t) Pc-4/Pf-4/Pr-4/Ps-4/Pt-7/Pab-10 RM/WH/WW/JD/HM

ACCESSION NR: AP5015364 UR/0286/65/000/009/0114/0114
621.791.06.364

AUTHOR: Makarkin, A. Ya.; Matsaikin, I. I.

TITLE: Method of brazing ceramics to metals. Class 49, No. 170826

SOURCE: Byulleten' izobretaniy i tovarnykh znakov, no. 9, 1965, 114

TOPIC TAGS: brazing, ceramic brazing, brazing alloy, ceramic to metal brazing, ceramic bonding

ABSTRACT: This Author Certificate introduces a method of brazing ceramics to metals in which the ceramic part is coated with metallizing paste to facilitate bonding. To increase the strength of the joint and to simplify the process, the parts to be brazed are put together, the brazing alloy is placed over the paste, and the parts are heated up to the brazing temperature. [ND]

ASSOCIATION: Organizatsiya gosudarstvennogo komiteta po elektronnoy tekhnike SSSR (Organization of the State Committee for Electronic Engineering, SSSR)

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